

Mixed Cost Analysis Example

Scatter Diagram Method

Suppose the following observations are made by U-Ship-It; a merchandising firm:

Month	Units Produced	Production Cost
January	62	225
February	116	360
March	55	215
April	30	150
May	46	180

Step 1: Plot the data points on a graph (Cost vs Units)
See Diagram #1.

Step 2: Draw a line that best fits the data.
See blue box – Diagram #1.

Step 3: Determine the **Estimated Fixed Cost**. To do this, estimate where the line crosses the Y-axis (Production Cost)
See red box – Diagram #1.

In this example: **Estimated Fixed Cost = \$78**

Step 4: Calculate the **Unit Variable Cost**.

(a) Pick two points on the line

(b) Calculate the slope. $\text{Slope} = \frac{\Delta \text{ in Cost}}{\Delta \text{ in Units}}$

(c) $\Delta \text{ in Cost}$ = Vertical distance between the points (see Diagram #2 – blue box)

(d) $\Delta \text{ in Units}$ = Horizontal distance between the points (see Diagram #2 – red box)

(e) $\text{Slope} = \frac{75}{32} = 2.34375 = 2.34$

In this example: **Unit Variable Cost = \$2.34/Unit**

Step 5: Write the Cost Formula

In this example: **Cost Formula = \$78 fixed costs + \$2.34 per Unit per Month**

Diagram #1:

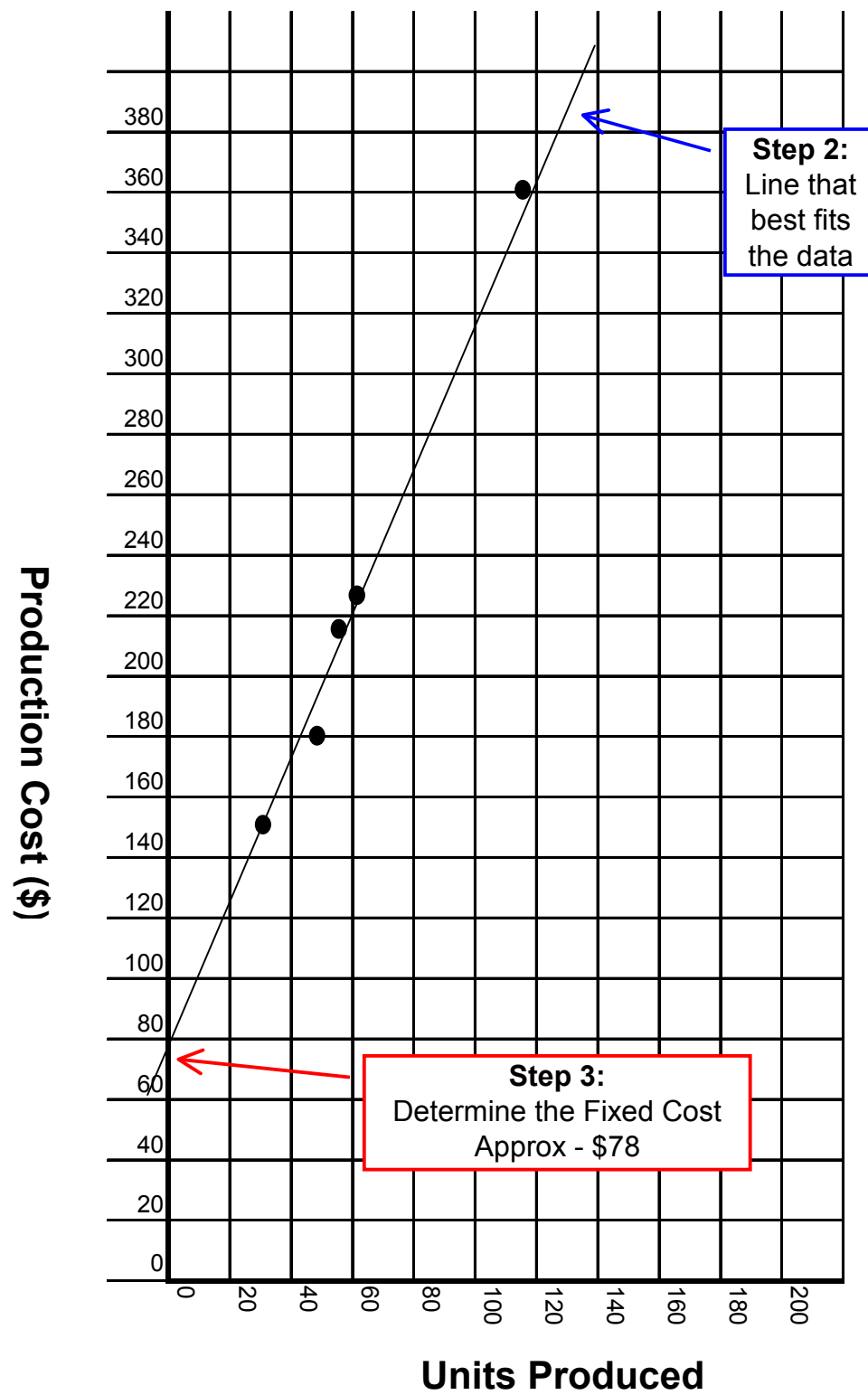


Diagram #2:

